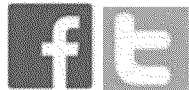


**To:** Wooster, Richard[[Wooster.Richard@epa.gov](mailto:Wooster.Richard@epa.gov)]  
**From:** Shaikh, Taimur  
**Sent:** Fri 11/3/2017 9:25:25 PM  
**Subject:** FW: Lake Tenkiller EFDC Modeling Update  
[Timeline of Bathymetric Mapping of Tenkiller Lake FINAL.docx](#)

FYI.

Taimur A. Shaikh, Ph.D.  
Acting Section Chief | NPDES Management Section (6WQ-PO)  
Home Section | Assessment, Listing, and TMDL Section (6WQ-PT)  
Water Division | EPA Region 6



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**From:** Adams, Chris [<mailto:Chris.Adams@owrb.ok.gov>]

**Sent:** Friday, November 03, 2017 4:20 PM

**To:** Shaikh, Taimur

**Subject:** RE: Lake Tenkiller EFDC Modeling Update

Taim,

Please see attached the timeline for bathymetry in Tenkiller. We initially put this together to clarify some of the confusion around the various data sets. We certainly were not well versed with them all at the time you asked us for the Wells dataset and we felt this could be useful, at least in state. The latest (2015) dataset is available from USACE. We are in no way suggesting that it should be considered as part of this process but it could be useful for future work if any is needed and, going forward, will be the dataset used for volumetric assessment of DO in Tenkiller. However, from the contractor's references it should be noted that they were long aware of the 2008 Well's bathymetry most recently included in the model.

Have a great weekend,

Thanks,

Chris

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**Chris Adams, PhD**

Quality Assurance & Data Manager

Water Quality Division

**OKLAHOMA WATER RESOURCES BOARD**

3800 N Classen Blvd, Oklahoma City, OK 73118

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**From:** Veiga, Rebecca

**Sent:** Friday, November 03, 2017 3:49 PM

**To:** 'Shaikh, Taimur'; Adams, Chris

**Cc:** Chambers, Julie; Cauthron, Bill; Joe Long ([Joe.Long@deq.ok.gov](mailto:Joe.Long@deq.ok.gov)); Soojung Lim; David Akakpo; Jeremy Seiger; Greg Kloxin; Shanon Phillips ([shanon.phillips@conservation.ok.gov](mailto:shanon.phillips@conservation.ok.gov)); Dwyer, Stacey; Wooster, Richard

**Subject:** RE: Lake Tenkiller EFDC Modeling Update

Hi Taim

A conference call the week of November 27<sup>th</sup> would work for me. Hope you are doing well.

Cheers

Becky

Rebecca Veiga Nascimento

Environmental Specialist

Oklahoma Water Resources Board

3800 North Classen

Oklahoma City, OK 73118

Phone: 405-530-8800

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**From:** Shaikh, Taimur [<mailto:Shaikh.Taimur@epa.gov>]

**Sent:** Friday, November 03, 2017 1:18 PM

**To:** Adams, Chris

**Cc:** Chambers, Julie; Veiga, Rebecca; Cauthron, Bill; Joe Long ([Joe.Long@deq.ok.gov](mailto:Joe.Long@deq.ok.gov)); Soojung Lim; David Akakpo; Jeremy Seiger; Greg Kloxin; Shanon Phillips ([shanon.phillips@conservation.ok.gov](mailto:shanon.phillips@conservation.ok.gov)); Dwyer, Stacey; Wooster, Richard

**Subject:** RE: Lake Tenkiller EFDC Modeling Update

Hi Chris,

Thanks so much for your quick response. The timeline is important. We need to brief our management if we

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are going to move forward with EFDC or if we take a different tack. There are lots of changes (including retirements) coming up and may pose scheduling questions. We agree that the % anoxic volume statistic may be valuable in determining criticality of some of the profiles. We'll follow up on the issue with the contractors and compare it against the language in 785:45-5-12 f (1) (C) (ii)

Thanks again and stay tuned.

Taim.

Taimur A. Shaikh, Ph.D.

Acting Section Chief | NPDES Management Section (6WQ-PO)

Home Section | Assessment, Listing, and TMDL Section (6WQ-PT)

Water Division | EPA Region 6



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**From:** Adams, Chris [<mailto:Chris.Adams@owrb.ok.gov>]

**Sent:** Friday, November 03, 2017 11:54 AM

**To:** Shaikh, Taimur <[Shaikh.Taimur@epa.gov](mailto:Shaikh.Taimur@epa.gov)>

**Cc:** Julie Chambers <[Julie.Chambers@owrb.ok.gov](mailto:Julie.Chambers@owrb.ok.gov)>; Veiga, Rebecca <[Rebecca.Veiga@owrb.ok.gov](mailto:Rebecca.Veiga@owrb.ok.gov)>; Cauthron, Bill <[Bill.Cauthron@owrb.ok.gov](mailto:Bill.Cauthron@owrb.ok.gov)>; Joe Long ([Joe.Long@deq.ok.gov](mailto:Joe.Long@deq.ok.gov)) <[Joe.Long@deq.ok.gov](mailto:Joe.Long@deq.ok.gov)>; Soojung Lim <[soojung.lim@deq.ok.gov](mailto:soojung.lim@deq.ok.gov)>; David Akakpo <[david.akakpo@deq.ok.gov](mailto:david.akakpo@deq.ok.gov)>; Jeremy Seiger <[Jeremy.Seiger@ag.ok.gov](mailto:Jeremy.Seiger@ag.ok.gov)>; Greg Kloxin <[Greg.Kloxin@Conservation.ok.gov](mailto:Greg.Kloxin@Conservation.ok.gov)>; Shanon Phillips ([shanon.phillips@conservation.ok.gov](mailto:shanon.phillips@conservation.ok.gov)) <[shanon.phillips@Conservation.ok.gov](mailto:shanon.phillips@Conservation.ok.gov)>; Dwyer, Stacey <[Dwyer.Stacey@epa.gov](mailto:Dwyer.Stacey@epa.gov)>; Wooster, Richard <[Wooster.Richard@epa.gov](mailto:Wooster.Richard@epa.gov)>

**Subject:** RE: Lake Tenkiller EFDC Modeling Update

Hi Taim,

Thanks for sending this. I know you likely have various pushes on the time so how critical is the timeline? Two weeks for review would be beneficial as we have some immediate commitments which cannot be changed but is that going to push the 2-3 week meeting timeline too much?

Also, just speaking for OWRB, after a very quick glance we may request a few outputs of the %volumetric anoxia stat to determine how critical some of the profiles may or may not be. If we do, I will try and let you know ASAP. Lastly, we finally heard back from USACE regarding the latest bathymetric dataset so I will be sending you the timeline I mentioned later today.

Thanks,

Chris

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**Chris Adams, PhD**

Quality Assurance & Data Manager

Water Quality Division

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**From:** Shaikh, Taimur [<mailto:Shaikh.Taimur@epa.gov>]

**Sent:** Friday, November 03, 2017 11:41 AM

**To:** Adams, Chris; Akakpo, David; Cauthron, Bill; [blanz@adeq.state.ar.us](mailto:blanz@adeq.state.ar.us); Brian Haggard; Miller, Caitlin; Greg Kloxin; Joe Long; Chambers, Julie; Soojung Lim; Pat Gwin; Veiga, Rebecca; John Benefield; [tom-elkins@cherokee.org](mailto:tom-elkins@cherokee.org); Tate Wentz; Wooster, Richard; Jeremy Seiger

**Cc:** Wooster, Richard; Dwyer, Stacey

**Subject:** Lake Tenkiller EFDC Modeling Update

Dear Technical Workgroup Members,

It's been a considerable amount of time since our last group communication. We have been actively pursuing improvements regarding the Lake Tenkiller EFDC model. After significant revisions to the lake model, the attached document represents what we can achieve with the EFDC model and calibration data for the 2005 - 2006 period. Specifically, we are sharing the profiles for temperature and dissolved oxygen at lake monitoring stations. We would appreciate your review of the attached modeled profiles and the overall statistics. Once we have had a chance to familiarize ourselves with the output, we would like to have a conference call to discuss the current model and decide on a path forward regarding Lake Tenkiller. Any decisions reached at that time will most likely impact options regarding the path forward for the watershed model as well. We hope to have a conference call in the next two to three weeks.

Thank you all for your time and patience and please stay tuned.

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Sincerely,  
Taim.  
Taimur A. Shaikh, Ph.D.

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